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KRAMER AND POLITZER ON AURAL SURGERY.—A REVIEW.*

[Commentated for the Boston Medical and Surgical Journal.]

THESE volumes, the consideration of which we intend to make the basis of the following article, are as widely different in character as it is possible to imagine two works on the same general subject to be; yet, for the sake of convenience, and perhaps also of comparative criticism, they are best noticed together. From the time of the first appearance of Dr. Kramer's writings in America, in 1838, down to the publication of his "Aural Surgery of the Present Day," they have generally, if not universally, received laudatory notices from our medical reviewers. We are constrained to believe that indiscriminate praise has been awarded his labors, because they were the only works, with any scientific basis, on the subject to which they pertained. With the new era in aural surgery, even the seeming necessity for this blindness to faults in theory and practice has passed away, and our criticisms, if more severe, become more just. Our readers may remember a little pamphlet entitled "A Vindication of the Present State of Aural Surgery," being an answer to Dr. Kramer's last work, which was fully noticed in our pages. The present brochure is probably intended as a rejoinder to that pamphlet. The author is very severe upon the other aural surgeons of England and Germany, taking issue with them upon almost all points, and by implication a claim for Dr. Kramer is presented as being the only known surgeon who practises and teaches the proper treatment for affections of the ear. The brochure opens with a table of 600 ear cases, 300 of which were observed in England, and 300 in

* *Ohrenheilkunde und Ohrenärzte in England und Deutschland. Ein Nachtrag zur Ohrenheilkunde der Gegenwart.* Von Dr. W. KRAMER. Berlin. 1865. Pp. 96.

Aural Surgery and Aural Surgeons in England and Germany. A Supplement to "The Aural Surgery of the Present Day." By Dr. W. KRAMER.

Die Beleuchtungsbilder des Trommelfells im gesunden und kranken Zustande. Klinische Beiträge zur Erkenntnis und Behandlung der Ohrenkrankheiten. Von Dr. ADAM POLITZER. Docent der Ohrenheilkunde an der Wiener Universität, &c. Mit 24 Chromolithog. Trommelfellbildern. Wien. 1865. Pp. 143.

The Illuminated Membrana Tympani, in a Normal and Morbid Condition. A Clinical Contribution to the Diagnosis and Treatment of Diseases of the Ear. With 24 Chromolithographic Representations of the Membrana Tympani. By Dr. POLITZER, &c.

Germany. We present this herewith in order that the nomenclature may be compared with that of three other modern authors—Toynbee, Trötsch and Schwartz.*

300 Cases of Diseases of the Ear observed in England, compared with the same number seen in Germany.

| EXTERNAL EAR. | In England. | Germany. |
|----------------------------------------------------------|-------------|------------|
| Catarrh of the Ceruminous Glands | 9 | 44 |
| Inflammation of the Cartilage | 4 | 8 |
| Inflammation of the Cellular Tissue | 1 | 1 |
| Inflammation of the Periosteum | 0 | 0 |
| Acute Inflammation of the Membrana Tympani | 1 | 2 |
| Chronic Inflammation of the Membrana Tympani | 28 | 55 |
| MIDDLE EAR. | | |
| Catarrhal Inflammation without exudation | 0 | 3 |
| Catarrhal Inflammation with free exudation | 7 | 10 |
| Catarrhal Inflammation with free and submucous exudation | 9 | 29 |
| Catarrhal Inflammation with submucous exudation | 239 | 143 |
| Nervous Deafness | 2 | 4 |
| | 300 | 300 |

No account of the results of treatment is given, a point upon which much stress is laid in America, and one that is doubly interesting in any table of cases from Dr. Kramer, since by a totally different mode of treatment from that at the present day recommended by him he formerly cured quite a satisfactory percentage of cases. He then considered a very large proportion of his cases as nervous affections, and had a very warm discussion with Mr. Wilde on this point. He explains his inconsistency, however, by stating that he is now able, by means of his five catheters and his flexible bougies, to recognize changes in the cavity of the tympanum which he was formerly with his means of diagnosis unable to appreciate.

It will be observed, by reference to the table, that affections of the middle ear came much more frequently under observation in England than in Germany. (It may be necessary to state that Dr. Kramer, for the past few years, has spent each summer in the practice of his profession in London, returning in the winter to Berlin.) This disproportion Dr. Kramer thinks is not to be explained by the difference of English climate and dietetics from those of Germany. He is inclined to ascribe it rather to the habits of the English in regard to ablution and access of fresh air. He particularizes as follows—the habit of plunging the head into a basin of the coolest water, purposely filling the ears, &c. He also says it is a custom in England to sleep in rooms where the windows are left open for some inches at all seasons of the year. Dr. Kramer remarks (quoting his own naïve language verbatim), "I remember to have seen, in very good houses in England, bedrooms in which the curtains before the chimney (?) were kept in constant motion day and night by the wind."

A detailed account is then given of nineteen experiments made by him, assisted by Prof. Recklinghausen, on the dead body and on a

glass apparatus, made to resemble the cavity of the tympanum with the Eustachian tube. No notice is given of similar experiments made by a committee appointed by the Berlin Medical Society, of which committee Virchow was chairman, whose report was, we believe, published before Dr. Kramer's.* Some of the conclusions which Dr. Kramer claims follow from his experiments, are herewith presented:—"Elastic bougies may be easily passed into the cavity of the tympanum through the catheter inserted into the Eustachian tube." This is certainly well enough demonstrated by the two experiments on the dead body, here given, but so far as we know the position that they can be introduced has been unassailed. The more important questions are, of what therapeutical value are they, and when indicated? Is there any danger in their use? We have lately heard it claimed that their use is as indispensable in treating affections of the tube and middle ear as Bowman's probe in lachrymal obstruction. The discriminate, careful use of bougies in certain rare cases of stricture of the Eustachian tube, is undoubtedly of value, as cases of Dr. Schwartze testify,† but Dr. Kramer's works do not give us much proof of their value, his testimony being much more clear as to the skill which he possesses in introducing them and as to the pain which their introduction causes.

It seems to us that the use of bougies is only indicated where we are utterly unable, after fair trial, by any of the practised methods, of rendering pervious the tube to effect this end, and that then they should be used with great caution, their introduction being very painful, and sometimes causing severe inflammation.

Another deduction of Dr. Kramer's is, that "air driven or blown into the Eustachian tube, through silver catheters, does not enter the cavity of the tympanum, i. e., does not circulate in it, but only to the end of the trumpet-like expansion of the tube, up to which point it circulates. Beyond this point it presses the there present column of air towards the cavity of the tympanum, to as great an extent as the still movable drum allows by curving outwards."

The experiments detailed are mostly made upon the glass apparatus and not upon the cadaver. It is sought to be proven that the air bath through the silver catheter will not remove or change the position of air and mucus collected in the cavity of the tympanum, the air blown in not reaching the middle ear, not circulating therein, but only pressing against the air already contained in the middle ear.

The daily clinical experience of every physician who uses the Eustachian catheter, proves sufficiently that blowing air through this instrument does act upon the drum and the contents of the cavity of the tympanum, breaking up recent morbid adhesions, restoring, for

* Schmidt's Year Book. New Sydenham Society, 1863. Troltsch's Diseases of the Ear. American Edition, p. 157.

† Practische Beiträge zur Ohrenheilkunde, p. 20.

an instant, at least, the function of the tube which is to allow an interchange of air between the pharynx and the middle ear. These are therapeutic results on the living subject, which never so many experiments on a glass apparatus do not affect.

Another conclusion reached is, that an elastic catheter can be passed into the tube as far as the isthmus, and from thence air can be blown into the cavity of the tympanum, air which will circulate in it; but this air will drive nothing out of the middle ear.

This conclusion seems to be drawn from one experiment on the glass apparatus.

The last conclusion drawn from these nineteen experiments which we shall notice, is the following:—

Mucous collections in the Eustachian tube, as far as they may be contained within its trumpet-like expansion, may be easily removed by the forcing or blowing in of air; this will, however, be more or less difficult if the moist collections are found above this point. This is evidence in favor of Dr. Politzer's method of rendering pervious the Eustachian tube. (This method, as most of our readers are aware, consists in blowing in air at the moment the patient swallows, both mouth and nostrils being closed.) Dr. Kramer, however, speaks very slightly of this procedure; he says:—"We see that Politzer's 'new method' is indeed new, but that in a diagnostic or therapeutic point of view it can only be remotely compared with the use of the catheter. Compared with this it is only a miserable resort in case of necessity, the employment of which, all pompous commendations to the contrary notwithstanding, stamps him who uses it with want of skill in the introduction of the catheter." This is a fair specimen of Dr. Kramer's style in dealing with an opponent, with any one who claims to have accomplished anything for aural pathology and therapeutics in any other way than by the employment of *his* catheters, *his* bougies, and *his* valvular handled speculum.

The remaining pages of this somewhat remarkable pamphlet are devoted to criticisms upon the aural surgeons of Germany and England—viz., Toynbee, Wilde, Yearsley, Von Trötsch, Erhard, Voltolini, Schwartze, Lucae, Weber and Politzer.

The false positions and misstatements of the author have been sufficiently answered in the pamphlet before referred to—"A Vindication of the present state of Aural Surgery." Some of these positions, however, are still persisted in. He is most severe upon Toynbee and Trötsch, because they have made the most dissections of ears. The fact that any surgeon examines a morbid ear, the history of which is unknown, is sufficient to excite a terrific volley from Dr. Kramer. He steadily ignores the fact that while it is true many specimens in Toynbee's museum, and many of Trötsch's cases as reported in *Virchow's Archives*, are merely morbid and not pathological, yet enough have a sufficiently complete history, fully or in part, to substantiate the theories deduced from observations on those

where the history remains unknown. Each day is adding to the pathology of the ear by the examinations of complete cases. While we were penning this very article, our eyes chanced to light upon such an one by Mr. Hinton, of London.* We must confess we prefer the practice founded upon such researches in morbid and pathological anatomy, as have been made by the authors who are here so sweepingly and severely condemned, to that based on experiments with catheters and bougies on the cadaver and a glass apparatus. Dr. Kramer has found the judgment of the profession at large pronounced against him, a fact which he frankly acknowledges. "To my astonishment, the judgment of the profession has been given greatly in favor of Toynbee, so that I am not allowed any longer to withhold my views, which are directly opposite."—P. 23. The little book before us will hardly do anything to change the verdict of the American professional public.

We would be far from underrating the value of Dr. Kramer's labors in the field of aural surgery. He was a pioneer in the scientific study of this once obscure branch of our art, and he deserves our lasting gratitude; but his arrogance of assertion and sneers at honest work, at the only basis of a substantial therapeutical structure—pathological anatomy—can but do much to cause us to forget his really useful labors. Reviewers in America, even lately, have seen fit to class his works with those of men with whom he has been contending—to give them a higher place than it seems to us they deserve, and we have therefore attempted to show what his views really are, and the manner in which they have been presented.

Dr. Politzer's book, as is indicated by the title, contains chromolithographic representations of the membrana tympani, in a normal and morbid condition, with explanatory letter press. It is, in fact, a complete monograph on the anatomy and affections of the drum and cavity of the tympanum.

The illustrations are from drawings made by Dr. Politzer himself. Frequent comparison of these plates with cases under our own observation has shown us that they are accurate guides in the study of aural disease. Dr. Kramer regards the examination and study of the membrane of the drum as a matter of comparatively small moment, but the greater number of practitioners consider its careful study as essential to any complete knowledge of the affections of the external and middle ear. Kramer's words are:—"The inspection of the membrana tympani, so long as it is not perforated, teaches us nothing as to the pathological condition of the parts enclosed in the cavity of the tympanum."† Per contra, says Dr. Politzer:—"The expanded value of the examination of the membrana tympani for diagnosis is an acquisition of our own time. In noting, then, the progress of modern aural surgery, its importance cannot be

* Guy's Hospital Reports, vol. x., part 3.

† Ohrenkrankheiten, &c., p. 60.

overlooked, because it has to no inconsiderable degree narrowed the territory of nervous deafness, which was formerly such a wide one. Supported by the researches of pathological anatomy, the inspection of the membrana tympani, with its evidence of important changes in structure, has considerably advanced our knowledge of the morbid processes occurring in the ear."

The work is divided into sections, comprising—

I.—Anatomy. Inspection.

II.—Anomalies of Transparency and Color.

III.—Anomalies of Continuity and Curvature.

IV.—The Movements of the Membrane.

The scope of our article will only allow a glance at the subject-matter of these several sections, which we may probably best gain by quoting, as far as may be, the author's own words. Considering, then, the anatomy of the drum, we quote:—

"The shape of the membrana tympani depends upon the ring surrounding it. It varies from the elliptical to the irregular oval, and even to the heart-shaped. Hyrtl places the proportion of length to breadth as from 4.3":4.0". Tröltsch, the greatest long diameter from above downwards anteriorly as from 9 to 10 mm; the shortest from below anteriorly upwards, as from 8 to 9 mm. The deepest portion of the arch of the membrane, the so-called umbo, corresponds to the end of the handle of the malleus, where it is embedded in the layers of the membrane. It is imperfectly divided into halves, the anterior being the larger, by the long process, or handle of the malleus. It has two sets of vessels, fully separated from each other by the *substantia propria*, or middle and fibrous layer of the drum, which has no vessels of its own. These two sets of vessels anastomose on the periphery of the membrane, the outer belonging to the connective tissue between the epidermis and the radiated fibres, the inner to the mucous membrane.

"The nerves of the membrana tympani, which, according to Arnold, arise from the nervus temporalis superficialis of the trifacial, more exactly studied by Tröltsch, run in the external layers parallel to the vessels, in three or four very fine little branches, whose terminations are as yet unknown. Gerlach also observed in some cases, in the mucous layer of the membrane, certain fibres without medullary substance."

For the examination of the meatus and drum, Politzer uses the conical specula of Gruber, modified by Arlt, Wilde and Toynbee, preferring, however, those made of hard rubber, together with the glass reflector of Tröltsch. He thinks ordinary daylight preferable to all other sources of illumination. "The text-books give very different descriptions of the color of the membrana tympani. Some describe it as light, like glass, transparent. Others, as pearl gray, or entirely white. Some of the inconsistency of these descriptions is due to the fact that, while some have examined the membrane on

the dead body, others have observed the living; then, again, much may be ascribed to the different modes of examination, also to the age of the subject, which latter circumstance has a decided influence on the color. We should remember that the membrana tympani is a translucent, so-called dim, turbid (trüben) medium, which reflects a portion of the light thrown in upon it, allows a portion to pass through, illuminating the cavity of the tympanum. From the promontory lying opposite the membrane, the light, with some loss, however, is reflected back through the membrana tympani and reaches the eye of the observer. The color of the membrana tympani is, therefore, one of combination, depending on various factors, viz., the color peculiar to the membrane examined, the kind of light used as a source of illumination, and the number and color of the rays which pass out from the promontory." . . . "In cases where the membrane may be described as normal, observed by ordinary reflected daylight, we may best compare its color to a neutral gray, to which a weaker tone of violet and light brownish-yellow is added." In one case of a membrane as clear as glass, Politzer saw through it, not only the long process of the incus, but also the side of the stapes. (Tafel I, B. 4.)

The light point, or triangular spot of light does not depend, as Wilde thought, upon the convexity of the membrane, for, as Tröltzsch remarks, the spot is visible on the most concave as well as on the convex portion of the drum. "If the membrane were one plane surface, there would be no reflection of light whatever, its inclination to the external auditory canal being such that, in accordance with the laws governing reflection, all the light thrown upon it would be reflected upon the anterior and inferior wall of the meatus. If, however, the arch or curvature of the drum, by means of the traction of the handle of the malleus, undergoes a change in its inclination, so that its anterior portion is exactly opposite the axis of vision, the light thrown in upon this point will be reflected back to the eye of the observer. This may be proven by an artificial membrane stretched over a tube." . . . "The light spot has generally a base of from $1\frac{1}{2}$ to 2 mm; in some cases its continuity is broken. Sometimes its base reaches fully to the periphery of the membrane; sometimes, however, only its apex is seen."

Second. Anomalies of transparency and color.

"The transparency and color of the membrana tympani undergo in many cases varied changes in diseases of the ear, which, by means of inspection, furnish important standpoints for diagnosis. . . . Out of 100 normal hearing individuals, not more than 25 have a perfectly normal-looking drum."

The causes of opacities of the membrane are different: 1. They may depend on loosening and thickening of the epidermis. 2. Morbid processes in the dermoid layer. 3. Want of transparency in the fibrous layer. 4. Thickenings of the mucous membrane.

In other words, the cause of opacity may rest in one layer, or two, or in all combined.

Loosening of the epidermis occurs commonly in primary affections of the drum. It may result from hyperæmia of the external ear, induced by freezing, from frequent furuncular inflammation, from eczema or erysipelas.

In a normal condition the vessels of the membrana tympani are not visible; when a hyperæmic condition obtains, a broadly extending ramification of vessels is sometimes seen, and this hyperæmia, without any structural change, may produce want of transparency. Ecchymosis of the membrane may occur in acute catarrh of the cavity of the tympanum, or when acute symptoms supervene upon a chronic form of the same affection. These ecchymotic spots are more apt to occur in decrepit, marasmatic patients.

Complete opacity of the membrane, depending on want of transparency of the *substantia propria*, depends either upon transmission from the external layer, or upon affections of the internal structure. They may even occur primarily in advanced life.

The primary, independent opacities of the drum, as the author's investigations have shown, are in the greater number of cases owing to fatty degeneration of the fibrous layer. It appears occasionally, with no affection of the hearing, also to a high degree in long existing impairment of this function; in deafness depending upon ankylosis of the base of the stapes with the fenestra ovalis. A case is referred to on which the microscope showed small, isolated, and grouped fat corpuscles, which were collected in great numbers on the periphery, in the position of the *annulus cartilagineus*.

Opacities which are the result of changes in the mucous layer of the drum, are the most common of all, because they generally appear as symptoms of catarrh of the cavity of the tympanum, and, as is well known, this is the most frequent of affections of the ear. The mucous membrane, which in a normal condition is the thinnest layer of the drum, is none the less able, by a very mild degree of swelling, to cause a considerable degree of opacity of the membrane, and by hypertrophy of tissue, thicken this part more than four fold.

On the other hand, it is shown by *post-mortem* sections of decided opacities observed during life, in certain cases, that the stratum of mucous membrane was not at all affected, the opacity existing only in the epithelial layer. The origin of partial opacities in the middle layer of the membrana tympani, can be traced with great exactness, especially in that form of inflammation of the external and middle ear which is accompanied by purulent secretion. These opacities are doubtless to be regarded as interstitial effusions from the adjacent vascular layer. This view is confirmed by examinations of the cadaver.

Calcareous deposits in the fibrous layer occur often, and are easily recognized appearances. They occur in early as well as in

advanced life. Politzer has only observed these cases where the impairment of hearing was very great, except in a few instances, where there was a moderate amount of hearing. It is probable that in the former cases similar processes had occurred, either on the membrane of the fenestra rotunda or at the base of the stapes. How far these calcareous opacities of themselves affect the hearing, can only be determined by examination of cases where their existence is not complicated with other changes, if indeed they thus occur.

Politzer deduces the following results from his observations on the living and dead subject:—

1. Calcareous opacities in the membrana tympani are to be regarded, in the majority of cases, as products of purulent processes in the ear, the exudation in the *substantia propria*, from the adjacent tissues, having undergone the chalky metamorphosis. Such calcareous concretions may occur, however, in the course of a chronic catarrh of the cavity of the tympanum, without any purulent action.

2. While examining a number of persons with normal hearing, the author found in a number of cases chalky formations in the membrana tympani, such as occur after a purulent process.

To take a general view of opacities of the membrana tympani, we conclude:—

1. Morbid processes in the membrana tympani are for the most part combination symptoms of affections of the external and middle, seldom of the internal ear.

2. They occur very commonly in the various diseases of the ear, and furnish important aids in diagnosis.

3. Anomalies of continuity (perforations) and arch (wölbung) of the membrana tympani.

The most frequent origin of the perforation is by extension of a purulent process from the cavity of the tympanum. Blows on the head, concussion, are also causes. The disturbances of function which arise as consequences of a perforation of the membrane, as has been long since shown by various authors,* is in no proportion with the loss of substance. . . . The changes on the fenestra of the labyrinth are

those which cause considerable impairment of hearing. If the mobility of the stapes upon the fenestra ovalis be not considerably impaired, and the membrane of the fenestra rotunda not very much thickened, the waves of sound, the membrana tympani being absent, pass directly to the stapes, through the malleus and incus, and reach the labyrinth in a considerable number.

The condition requisite to the healing of a perforate drum, is the checking purulent and excessive mucous secretion from the cavity of the tympanum. So long as these latter continue, any permanent cicatri-

* Dr. E. H. Clarke. American Journal of the Medical Sciences, January, 1868.

zation of the drum is simply impossible. In a certain class of cases the membrane heals with complete restoration of the hearing, without any evidence of perforation. This is more common in acute purulent catarrh, occasionally after a chronic purulent process.

Although not strictly pertaining to the subject in hand, Dr. Politzer gives a sketch of his treatment for chronic catarrh of the cavity of the tympanum. "Having examined the condition of the meatus and drum, and having ascertained how well the watch and conversation are respectively heard, we proceed to the examination of the tube, either by means of the catheter or the air-bag (Politzer's method), convincing ourselves of the passage of the air, by means of the otoscope. If this inflation of the cavity cause any increase of the hearing power, and we can from this diagnose a swelling, with secretion from the mucous membrane, injections of an astringent, such as sulphate of zinc, through the tube, by means of the catheter and air-bag, are indicated, using a solution of from four to eight grains to the ounce of water. The catheter is passed into the mouth of the tube, held in position by the left hand, the solution, dropped into it from a glass tube, is then drawn into the cavity of the tympanum by means of the air-bag, the patient swallowing at the same time. The injections should be made every three days, and continue from three to five weeks.

"If, however, our (diagnostic) inflation of the cavity of the tympanum produce no effect whatever on the hearing, we can conclude that the impairment of function depends on the product of catarrhal inflammation—i. e., thickening of the mucous membrane lining the cavity of the tympanum and covering the *ossicula auditus*, with rigidity and impairment of motion of these latter. We would then employ the air-bath in connection with moderately irritating injections, such as *R. Sal. ammoniac, ʒ i.; aq. destillata, ʒ i. M.*; or *R. Potass. iodid., gr. x.; aq. destillata, ʒ i.*; or, *R. Natr. chlorat., gr. v.; aq. destillata, ʒ i. M.* Continue this treatment, with intervals of three days, as above, from two to four weeks. A long-continued, uninterrupted inflation of the cavity of the tympanum is never advisable. The introduction of elastic bougies through the tube, in case of its narrowing, is sometimes of benefit."

Fourth. Anomalies of arch or curvature of the drum. Under this head are comprehended swelling, abscesses, granulations, collapsed *membrana tympani*, &c. Here only anatomical and pathological knowledge, with a proper apprehension of the course of the morbid process, will break the way for a correct diagnosis. "When, therefore, the privy medical councillor, Dr. W. Kramer, of Berlin, describes the results of the physiology and pathological anatomy of the ear as of no value in aural surgery, we can only pity the man who, grown gray in the midst of constant contradictions and quarrelling, has won for himself a truly sad name in the annals of sci-

ence, through his incessant outburst of rage against the modern progress of aural surgery."

Fifth. Movements of the membrana tympani. If we observe a normal membrane, either while the Valsalvian or Politzer's method of inflating the drum is practised, or when air is driven through the catheter, we do not see the handle of the malleus change its position (although it makes an excursion of from $\frac{1}{4}$ to $\frac{1}{2}$ "). Sometimes the posterior segment of the membrane moves strikingly, and often a new light spot appears. The light spots advances, often becomes indistinct; to a very different degree, however, in different persons. When the pressure of air ceases, the membrane recovers its normal position.

There is, however, a different state of things in diseases of the middle ear and in changes on the membrana tympani. When the Eustachian tube is impervious, and the stream of air used will not overcome this impermeability, or in cases of adhesions of the drum to the inner wall of the cavity of the tympanum, or in any considerable thickening of the membrane, we will not be able to discover any movement of the drum. An irregular movement in certain parts will occur when there are isolated adhesions, irregular thickening, cicatricial formations or partial atrophy of the membrane. In other cases, when the Eustachian tube is abnormally widened, and the stream of air passes with full power into the cavity of the tympanum, the excursion of the malleus will be the greater, the more the membrane has lost its elasticity by atrophy of any or all of its layers.

Rarefaction of the air in the cavity of the tympanum also produces visible movements of the drum. If a patient swallow, with the nostrils and mouth closed, we see the light point change its form. Sometimes the appearance is as if the light point were pushed outward. Hence, perhaps, arose the erroneous opinion that in the act of swallowing with the nostrils and mouth closed, air was pressed on to the cavity of the tympanum. . . . At the first movement of the act of swallowing, a very slight densification of the air takes place, but immediately rarefaction occurs. . . . In a normal membrane no motion takes place during the act of swallowing, the nasal passages being open. The column of air circulating in the pharynx and communicating with the cavity of the tympanum is not powerful enough to overcome the one pressing upon the drum from the outside.

During respiration, as a rule, there are no movements of a normal membrane. They only occur in rare cases as synchronous to-and-fro motions, when we must infer a gaping of the faucial orifice of the tube. Quickly-repeated, violent respirations will, however, sometimes produce a movement of the drum. It is an erroneous idea that at each tranquil respiration the tube opens and a consequent motion of the drum occurs.

Pulsation in the membrane is not an uncommon appearance.

Wilde called our attention to its existence in perforation of the membrane as pathognomonic of the loss of substance. Politzer has shown, in a previous communication,* the existence of pulsatory movement in a drum while it is intact, and these observations have been lately confirmed in private communications from Drs. Tröltsch and Schwartz. The normal drum does not pulsate, but pulsations can be excited by frequently touching it; also injection of the vessels. Even then, inspection will not be able to detect it; but by fastening a rice straw by means of gum to the membrane, the external end of the little indicator will be seen to move synchronously with the pulse. Pulsation in a perforate membrana tympani occurs as a result of the expansion of the vessels of the swollen and loosened membrane of the cavity of the tympanum and of the drum itself, narrowing the space and pressing the collected secretion and air against the perforation. The monograph closes with a few remarks as to the importance of a knowledge of the appearance of the membrana tympani in a medico-legal point of view, and in cases of suspected malingering.

We are aware that the quotations and condensations we have thus made do not adequately represent Dr. Politzer's little book, and of the danger of separating an author's opinions from their proper surroundings. Yet in the pages of a journal aiming to equally represent all that is progressive in modern medical literature, our rapid review, which we trust may furnish at least new subject-matter for thought and investigation, is all that can be allowed us.

D. B. Sr. J. R.

HISTORY, THEORY AND PRACTICE OF SYPHILISATION.

By PROFESSOR W. BOECK, of CHRISTIANIA.

Delivered in the Theatre of the Meath Hospital and County of Dublin Infirmary on Friday, June 2, 1882.

GENTLEMEN,—I have been requested to deliver a lecture upon syphilisation: I willingly comply with this request, as Dr. Moore has had the goodness to translate my lecture, but I must apologize for my imperfect pronunciation of your language.

By syphilisation I understand the mode of treatment by which, by repeated inoculations of syphilitic matter, taken from primary sores, I bring the body into the condition that it is no longer susceptible of the action of the syphilitic virus.

It will, perhaps, be agreeable to you, Gentlemen, before I proceed further, that I should lay before you a short *résumé* of the history of this mode of treatment. Anzias-Turenne, of Paris, performed inoculations of syphilitic matter upon animals in order to see whether this virus could be transferred to them, which up to that time had

been denied. In this he was at length successful, and it was chiefly apes which could with the greatest facility be inoculated. After chancres had been repeatedly produced in the same ape, a great many sceptical physicians wished to see his inoculation, and a meeting was appointed in the *Jardin des Plantes*; the old ape was inoculated, and a still greater crowd assembled a few days later to see the result. But when the ape was brought in nothing was to be seen. It may easily be imagined how this result was received, and that Auzias-Turenne was ridiculed, but he did not on that account give up the method: he continued his inoculations, found that the old ape was not susceptible of fresh inoculations, but that a second ape after inoculations got chancres, though this ape also after a series of inoculations became unsusceptible.

Auzias-Turenne now saw clearly that he had here a natural law, in itself resembling that which your immortal Jenner had discovered in the inoculation of vaccine matter, and we shall not upbraid him that his French blood now carried him away, and that his first idea was to employ the inoculation of syphilitic matter like that of vaccine matter—as a prophylactic. We cannot gainsay him that his train of ideas is logically correct, but it is not practically correct, for the great rule is, that he only gets syphilis who himself will have it.

As the result of this idea of employing syphilisation as a prophylactic, my friend Auzias wished at the time to syphilise all public girls, seamen, and soldiers, and he would willingly have syphilised us all. No wonder, then, that such an idea met with all the opposition it deserved; but it was not long until Auzias renounced his error, and at the same time there appeared an Italian, Sperino, of Turin, who showed, by a series of experiments, that the syphilitic disease was cured during these inoculations, which Auzias, too, at the same time, demonstrated. Still, this failed to reconcile physicians to the new method; such a prejudice had been raised against it that both the Académie de Médecine of Paris and the Academy of Turin condemned it without having the necessary materials before them for passing any judgment; the paradox involved in this method appeared to all so enormous as to render proofs of its absurdity unnecessary.

Lecturing in the University of Christiania upon syphilis, and having a section of the Hospital devoted to this disease, I carefully investigated all that was advanced upon this subject, and ascertained that there must be some truth in it. I had, through a period of very many years, found that our treatment with mercury is highly unsatisfactory; I therefore considered that, from my position, it was my duty to give a trial to this new method, although it appeared to me as paradoxical as it did to all the world, and notwithstanding that it had been condemned by two Academies. But before I began, I laid down for myself certain limits, to which I still adhere. It will

be at once observed that I will not speak of the method as a prophylactic: this would be immoral; but neither am I at liberty to employ it in every case of syphilis; it is only when syphilis has become constitutional—when the syphilitic virus flows with every drop of blood through the system—that I allow myself also to inoculate it upon the skin.

The next question is, whether I shall employ syphilisation in every case of constitutional syphilis?

By a fortunate coincidence it happened that of the two individuals whom I first took under treatment by syphilisation, the one had not been treated for syphilis, while the other had been the subject of all the resources of our art. In the first the inoculations proceeded without difficulty, the symptoms gradually disappeared—in a word, I found myself upon the beaten path. In the other case all was irregular, I could effect no order at all, and when my first patient was well, the phenomena in the second were still in full bloom. I immediately began to suspect that it was to the medicines previously given that this result was attributable, and on subsequently investigating this opinion, its truth has been most completely confirmed; so that I have made it a general rule to syphilise only those who have not previously been treated with mercury, whether this has been employed for primary or constitutional symptoms. But if I be asked whether syphilisation has not some effect in these cases, I can answer decidedly in the affirmative—it often acts incredibly. Dr. Simpson, of Edinburgh, has recently described two such cases, which were sent over to me by Prof. Simpson; what is there stated corresponds precisely to what I have myself noted, and of which any one may satisfy himself. But the reason why I do not undertake the treatment of such individuals is to avoid having relapses, which in these cases are apt to occur.

Now, in order to make my usual mode of proceeding as plain as possible, I shall suppose that a person laboring under primary syphilis consults me. In this case I treat the primary sore as a simple ulcer—I prescribe a weak solution of sulphate of zinc or such like, and occasionally employ a slight cauterization with nitrate of silver; I give no internal medicine, but make the patient come to me once or twice a week, that I may observe when the constitutional symptoms break out, for the earlier syphilisation can be commenced the better. So soon as I perceive the first constitutional signs, I commence the treatment by taking matter from an indurated chancre or from an artificial pustule in a patient under treatment by syphilisation. I inoculate first on both sides of the chest, and make three punctures with a lancet, precisely in the mode adopted in vaccinating. After three days pustules are developed, and then I inoculate again in the sides, taking the matter from the pustules produced by the first inoculation, observing carefully to make the second inoculation at a distance from the first, so that the sores may not

become confluent. At the end of three days I make the third inoculation, taking the matter from the pustules of the second inoculation; and I now continue to inoculate on both sides every third day, always taking the matter for the fresh inoculation from the pustules last formed, so long as this matter continues to afford a positive result. When it no longer takes, I procure new matter in the same mode as for the first inoculation, and continue with this as with the first. This second matter will yield smaller sores and a shorter series than the first, and when it no longer takes I procure a third and proceed in the same manner. This third matter will produce very little effect, and I therefore pass to the upper arm, where I proceed in precisely the same mode as in the sides; and when no effect is any longer visible in the upper arm I remove to the thighs, and continue there in the same way as in the two preceding places. By the time the inoculations are here brought to an end, from three to three and a half or four months have probably elapsed, the symptoms which manifested themselves from the commencement have disappeared, or if some slight symptom has remained this disappears spontaneously. It often happens that during the treatment a fresh outbreak takes place, and he who is not acquainted with the method believes that some other plan must now be adopted; another infers that syphilisation is of no avail. But, let them not be deterred by any symptom, not even by the most severe iritis, which never requires anything but the instillation of a little atropia. But, happen what may, let them shut their eyes to it and continue the inoculations. The patient who, during the whole treatment, can attend to his business, feels, after it is completed, perfectly well, and may immediately expose himself to any hardships. He can endure wet, cold—in a word, everything which after mercurial treatment would render him liable to life-long illness. It is probable that I may now be asked as to the result at a later period for these individuals, and I shall speak first of the relapses. On the whole, I have treated 429 individuals, and of these 45 have come back, making about 10½ per cent.; but, as we may calculate that some of those treated during the last year will return, I will assume that the relapses will amount to 12 or 13 per cent. But, let us now examine more closely what is called a relapse after syphilisation. In many instances a single mucous tubercle, a small white spot on the tongue or in the throat—symptoms for which nothing more than external means are employed, and for which the patients are treated only for a few days in hospital. So far as I at this moment remember, thirteen were taken again under treatment with syphilisation, and two with iodide of potassium.

You will next ask whether tertiary symptoms have been developed in any of them. This has been the case, I believe, with three; but at the same time these individuals have been perfectly well—their general health has not, as so often happens after mercurial

treatment, been broken down, and in those who have had relapses it has been good, as it is evident that in those who have had no relapse it has been particularly good.

We come now to the children of those who have been syphilised. Here we are not much better off than after the mercurial treatment; we see the same rule to prevail as after this last method, namely—that when the mother has been syphilitic, the first child or children is or are syphilitic; that they are healthy is the exception. If the father has been syphilitic, the children are, in general, healthy; that they are syphilitic is the exception.

You will next propose to me the question how I treat syphilitic children. I treat them precisely as I do adults; and it is interesting to see that the sores in these little ones bear in size a proportion to that of the child, and that the patients suffer less, and not more, than adults. The results of syphilisation in children with hereditary syphilis have not been brilliant; of forty-two children, twenty-two died, but I have taken under treatment every case that I have met with, and every one knows that in such children there are very often affections of the internal organs which lie beyond our power to cure. I cannot at this moment say how many little children with acquired syphilis I have syphilised, but they are not few, and of these only one died, the cause of death in that instance being croup after I had performed tracheotomy. Of adults, two died—an old woman of dysentery, and a young woman of puerperal fever. This last case I forgot to include in the *résumé* I have given in the *British Medical Journal*.

Now, in order to give you a definite idea of the confidence I have in this method after having practised it daily for thirteen years, I shall say only that if I myself, or any of mine, were so unfortunate as to get syphilis, I should employ no other means than syphilisation.

Still, a few words in conclusion, gentlemen. Vaccination has for many years stood alone; syphilisation now comes to join it. Shall we stop here? I believe not. Vaccine and the syphilitic matter are both animal viruses; we see them contained under a similar law. May not also the other animal poisons be referred to a similar law? We see that Nature is simple in her diversity: should this not also here be the case?—should not glanders, hydrophobia, &c., some time be curable? Let us all seek to clear up this dark point in our science, and let us not, as hitherto, with respect to syphilisation, seek only to extinguish the rising gleam.

[Among the crowded auditory present during the delivery of the foregoing address were:—The President of the King and Queen's College of Physicians in Ireland, the Regius Professor of Physic in the University of Dublin, Sir Wm. R. Wilde, the Professors of Surgery and of *Materia Medica* in the Royal College of Surgeons, the Rev. Prof. Haughton, M.D., F.R.S., Prof. Banks, Mr. Tufnell, Mr.

Morgan, Drs. Smyly, Bennett, Banon, Martin (of Portlaw), Fleming, Head, Hardy, Hayden, Byrne, Moore, &c. &c. On the conclusion of the lecture, the President of the College of Physicians proposed, and Mr. MacNamara seconded, a vote of thanks to the learned Professor for his very lucid and interesting exposition, which, notwithstanding the disadvantage of speaking in a foreign tongue, he had so admirably delivered. The vote of thanks, which passed unanimously amid great applause, was conveyed to the Professor in suitable terms, on the part of himself and of the students, by Dr. Stokes. —*Medical Times and Gazette.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, AUGUST 3, 1865.

PLAGIARISM.—Possibly there may be among those of our profession connected with medical journalism in this country some happy individual who finds the duties of his situation easy. The medical district whose interests he represents may show its sympathy with his efforts by filling his desk with copy before the dogdays, that ever-recurring season of editorial panic, approach, and his labors may be lightened by the pleasant reflection that they are at least remunerative. We like to believe that there may be even among us that proverbial exception to a general law, and we trust that if he is to be found in our list of exchanges, he will announce himself. We have, in fact, given over expecting much sympathy or voluntary assistance from our professional brethren, for we are convinced that they do not really understand how much we need them. On the other hand, it is satisfactory to our future to reflect that the definition of complete human happiness among those who in their past have attempted the management of a medical journal is the sensation of relief from editorial responsibility. We do expect, however, from all engaged in these duties a proper appreciation of the difficulties attached to them and an observance of that mutual courtesy and highmindedness which should characterize the public representatives of a noble profession.

We are sorry to be obliged to confess, however, that a portion of our medical press is not always conducted in accordance with the principles of common honesty even. Within the past few years we have repeatedly observed that articles have been taken from our JOURNAL and re-published in others, without any expression on their part as to the source from which they were derived. It is undoubtedly a flattering mark of approval to find one's labors so widely appreciated, but then the compliment would be more satisfactory if it were a little more personal. A certain latitude is, we are aware, assumed by the medical, as well as the general press, in copying extracts from other journals, or bits of first-hand information, without mentioning that from which they were last taken, but even this is avoided by the best organs when the article is of any length or of any but the most general character. It is not of this form of borrowing without thanks that we now speak, but of the more serious matter of abstracting communications or editorials, and re-publishing them either as selec-

tions without any credit to their authors, or as entirely original articles. This is plagiarism.

We do not make this charge against the medical press as a whole, for there are many journals in the country, and by far the largest part, which would as soon steal type as be guilty of such a breach of mutual courtesy, but we will merely turn to the exchanges which happen at this moment to be lying upon our table for its substantiation.

In the *Cincinnati Lancet and Observer* for January, 1865, we find an article which was communicated to our JOURNAL, re-published in full, without any reference to its author or the source from which it was taken.

In the *Eclectic and University Medical and Surgical Journal*, Philadelphia, June, 1865, will be found a leading editorial on the Russian epidemic, beginning in this way: "Suddenly the world has been startled by the intelligence that a fearful pestilence is ravaging Eastern Europe." Can it be a coincidence that, on the 27th of April, we published an article on the same subject which began as follows?—"Of a sudden the world is startled by the intelligence that a fearful pestilence is ravaging Eastern Europe." And so the two run on. The same Journal, in March, copies an extract we had selected from Waitz's Introduction to Anthropology on "The Healing Power in various Nations," without mentioning that it was indebted to us for the same. It may be interesting to add that the editor of this Journal is Professor of the *Principles and Practice of Medicine* in the Philadelphia University.

In our issue of June 9th, 1864, there appeared the report of a case of Spontaneous Thrombosis, which was extracted from and credited to the *Medical Times and Gazette*. This was followed by a long editorial note containing an account of similar instances in our own experience. This extract was copied by the *Ohio Medical and Surgical Journal* and properly referred to its English source, but our comments were inserted as their own.

The *American Druggists' Circular and Chemical Gazette*, an excellent journal and one generally careful in giving credit where it is due, in its last number paraphrases our recent editorial on the Starvation of Prisoners, inserting the extracts we gave from the Sanitary Commission pamphlet in the same transposed order as they occur in our JOURNAL.

The *Dental Register of the West* for July, 1865, re-publishes a recent communication to our JOURNAL on Bantingism and Obesity, which it attributes to the *Dental Cosmos*, and the items of Foreign Medical Intelligence, which are selected by us from English, French and German journals, have been repeatedly copied collectively by some of our exchanges without any acknowledgment.

These are but a few instances of the many, and by no means the worst, which we might expose by referring to our files of exchanges, but they are enough to serve our present purpose. Some of them are, we hope, the result of mere carelessness, while of others, perhaps, the less said the better. A medical journal, to perform its responsible duties of guardian and critic, should keep its own garments pure, and we look to other editors to aid in preventing such offences against the honor of our calling.

ADIPOCIRE.—Dr. Speir, of Brooklyn, exhibited a specimen taken from the body of a lady 45 years of age, who had been a patient of Dr. J. D. Connolly, of Brooklyn. The patient was attacked in December last with a very severe pain in the left hypochondriac region. Dr. C. was called and made an examination of the chest, suspecting the existence of some pleurisy or some disease of the heart. Opiates and other anodynes were prescribed, but failed to relieve her, and subsequently the hypodermic injection of morphine was tried. The patient stated to her attending physician that she had suffered from the same symptoms previously. Dr. Connolly being unable, as the result of a second examination which he gave her, to make out a diagnosis, called a consultation, consisting of Drs. Crane and Enos, but these latter gentlemen failed also to come to any conclusion as to the nature of her ailment. The lady died on Monday last.

The first thing which struck Dr. Speir, who made the autopsy, was the great amount of adipose tissue which had been developed, it being about two inches in thickness over the chest and abdomen. The chest contained in both pleural cavities a small quantity of serum; the lungs were normal, except, perhaps, an increased hypostatic congestion at the base of each. The heart was normal. The abdomen contained a sero-purulent fluid. There were evidences of peritonitis present, and at different situations the surfaces of the intestine were glued together. In an attempt to remove the stomach, Dr. Speir thrust his hand through a mass which felt like hardened feces, and a perforation was accordingly suspected. Careful search was made of the stomach and intestine, but nothing of the sort found. This soft substance proved not to be feces. There was about a pint of it scattered throughout the left hypochondrium, in the mesentery and in the surrounding adipose tissue. It was adherent to the diaphragm, and seemed as if it originally started from that organ. The microscopic examination showed only crystals of margaric acid, while some fibres of connective tissue in a state of fatty degeneration seemed to run through it. Dr. Speir thought it to be an example of adipocire.

In answer to a question in relation to the cause of the symptoms, Dr. Enos stated that he had seen the patient several times, and had come to the conclusion, with the other gentlemen, that it was explainable on the supposition of the existence of pleurisy with effusion. In conclusion, he remarked that the substance alluded to by Dr. Speir was very remarkably situated, as it was in such a relation to the diaphragm, and not enclosed in a cavity of any size.

Dr. Voss asked if it might not have been cancerous disease of the mesenteric glands.

Dr. Speir replied that there were no evidences of such a disease presented by the microscope, but he thought it reasonable to suppose that the mesenteric glands might originally have been the seat of the degeneration just described.—*Proceedings of the New York Pathological Society, in New York Medical Journal.*

DR. FELIX ROBERTSON, the first white male child born in Nashville, died in that city on June 9th at the age of 84. He was the sixth child of Col. James Robertson, the pioneer of the Cumberland settlement. The settlers arrived there during the winter of 1779-80, and the deceased was born on the 11th day of January, 1781. He studied

medicine, and became an excellent physician. He introduced the use of quinine into that section of country, and was repeatedly elected President of the Tennessee Medical Society. He was a prominent politician in former days, and a warm friend of Andrew Jackson.—*Medical and Surgical Reporter.*

GEORGE W. BURKE, M.D., of Middletown, Ct., has had awarded to him the "Russell Prize" by the Connecticut Medical Society, for the best essay on the subject proposed, viz., "*Prophylaxis as it relates to Phthisis Pulmonalis.*"—The Ives Prize Committee of the same Society, to whom was assigned the duty of selecting subjects for dissertations, and of awarding the premium for that which they shall decide to be the best, submit the following:—I. Cerebro-spinal Meningitis. II.—An Inquiry into the Therapeutic Value of Mercury and its Preparations. Competition for the prize will be limited to practitioners of medicine now resident of the State, and the author of the successful dissertation on either of the subjects named, will receive the premium of fifty dollars. Dissertations on the foregoing subjects must be transmitted to the Chairman, Isaac G. Porter, M.D., New London, on or before the first Wednesday of April, 1866.

AMERICAN MEDICAL ASSOCIATION.—Members desiring copies of the *Transactions* for 1865 must forward their subscriptions (\$3) immediately, as the number of copies published will be but slightly in excess of the number of subscriptions.

WM. B. ATKINSON,

Permanent Secretary, 215 Spruce St., Philadelphia.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, JULY 29TH, 1865.

DEATHS.

| | Males. | Females. | Total |
|-----------------------------------------------------------------|--------|----------|-------|
| Deaths during the week | 67 | 48 | 115 |
| Ave. mortality of corresponding weeks for ten years, 1853—1863, | 50.4 | 45.6 | 96.0 |
| Average corrected to increased population | 00 | 00 | 100.1 |
| Death of persons above 90 | 0 | 0 | 0 |

PAMPHLETS RECEIVED.—Report of the Recording Clerk of the Hospital Department, and the Physician and Superintendent of the Insane Department of the Philadelphia Almshouse, for the year ending Dec. 31st, 1864.—On the Direct Influence of Medicinal and Morbific Agents upon the Muscular Tissue of the Bloodvessels. By R. Cresson Stiles, M.D., Physician to Kings County Hospital, N. Y.

MARRIED.—In Roxbury, July 28th, Dr. Lorenzo B. Dutton to Miss Lucy A. E. Dadman, both of Roxbury.—In Rindge, N. H., July 19th, J. H. Darling, M.D., Surgeon U.S.N., to Miss Carrie M. Burnham.—In this city, June 14th, William P. Farr, M.D., of Indianapolis, Ind., to Miss Hattie F. Plaisted.

DEATHS IN BOSTON for the week ending Saturday noon, July 29th, 115. Males, 67—Females, 48. Accident, 5—apoplexy, 2—inflammation of the bowels, 3—congestion of the brain, 1—inflammation of the brain, 1—cancer, 1—cancer of the oris, 1—cholera morbus, 1—cholera infantum, 22—consumption, 8—convulsions, 3—diarrhoea, 6—diphtheria, 1—dropsy of the brain, 7—drowned, 2—dysentery, 9—typhoid fever, 2—gangrene, 1—disease of the heart, 2—homicide, 1—infantile disease, 5—disease of the liver, 2—congestion of the lungs, 3—disease of the lungs, 1—inflammation of the lungs, 2—marasmus, 5—old age, 2—rheumatism, 1—scrofula, 2—smallpox, 1—sunstroke, 1—tabes mesenterica, 1—teething, 1—tumor, 1—unknown, 4—whooping cough, 2.

Under 5 years of age, 67—between 5 and 20 years, 13—between 20 and 40 years, 13—between 40 and 60 years, 8—above 60 years, 14. Born in the United States, 86—Ireland, 19—other places, 10.